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BULLETIN

No. 4

Scientific Society of San Antonio

An Annotated Catalogue of the Amphibians and Reptiles of Bexar County, Texas

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By JOHN K. STRECKER
Curator of Museum, Baylor University
WACO, TEXAS

Smithsonian Institution
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National Museum

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An Annotated Catalogue of the Amphibians and Reptiles of Bexar County, Texas

By

JOHN K. STRECKER

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The present catalogue, compiled at the suggestion of Mr. Edward W. Heusinger, is the first attempt to form a complete list of the amphibians and reptiles of Bexar County, Southwestern Texas. Mr. H. P. Attwater's list of Bexar County birds (Auk, IX, 1893, pp. 220-238 and 337-345) and Mr. J. A. Allen's report on Mr. Attwater's mammal collection (Bull. Am. Mus. Nat. Hist., VIII, 1896, pp. 47-80) have given biologists an accurate knowledge of the avian and mammalian fauna of the county, but up to the present the amphibian and reptile records have been scattered through the literature and but few workers have been in a position properly to appreciate the richness of its herpetology. Prof. E. D. Cope's essay "On the Zoological Position of Texas" (Bull. U. S. Nat. Mus., No. 17, 1880) contains the most complete list that has heretofore been published but his paper is rare and the nomenclature now very much out of date.

The compiler of the present list has frequently visited the county and collected its animals and it is only to this extent that he is claiming any credit, for practically all of the species collected by him have also been obtained by others. However, a superficial knowledge of a region is better than no first-hand knowledge at all, and the fact that he has visited San Antonio and the region about Helotes Creek may possibly prevent some mistakes in specific localities. The herpetological work in Bexar County has been well done, the collected specimens are still extant and nothing remains but to gather the scattered references into one connected list and add a few words of credit to those, who after doing their mite to add to our knowledge concerning the habits of the animals recorded, have passed along.

The region about San Antonio has changed wonderfully since the days of the early United States Government expeditions, when Colonel Graham, Major Emory, John H. Clark, Doctors

Kennerley and Woodhouse and Lieutenants Whipple and Churchill sent in their unique Texas specimens, many of which were named after their collectors. In those days Spencer F. Baird and Charles Girard were the foremost American herpetologists and the two have their names, either singly or jointly, as authorities for the majority of the early Texan species. Herpetologists will remember Graham, Emory and Clark long after their names and connection with the Mexican and Northern boundary surveys will have been forgotten by other men. Considering the fact that most, if not all, of these early southwestern expeditions passed through San Antonio, it seems remarkable that this place cannot be claimed as the type locality for more of the early reptile species. This is due, in part, to faulty and indefinite labelling of specimens. Very few have specific locality records and such indefinite entries as "Indianola to San Antonio" and "San Antonio to El Paso" are frequently found in the early museum records. It is questionable whether some of the specimens labelled San Antonio were actually collected within the confines of the region that we now know as Bexar County. However, to the intrepid explorers and naturalists above mentioned is due great credit for the fact that they were able to send specimens at all, for between the perils and hardships of the march and the poor methods of preserving then at hand, their collections were all the more wonderful.

All of the Bexar County material collected prior to 1875 of which the writer can find record, is labelled either San Antonio or Bexar County. In 1878, a Mr. C. W. Schuermann sent some San Antonio reptiles to the United States National Museum. About the same time, Mr. Gabriel W. Marnock of Helotes began his studies in herpetology which continued until his death forty-two years later. He was a constant correspondent of Cope and furnished that great herpetologist with the majority of his southwestern Texas species. He personally discovered two new species of frogs and two new species of lizards. The frogs (*Eleutherodactylus latrans* Cope and *Syrrhopus marnockii Cope*) are not uncommon in the vicinity of Helotes but represent generic groups characteristic of the Neotropical geographical realm. One of the lizards (*Plestiodon brevilineatus* Cope) is widely distributed over a large area in middle and southwestern Texas. The other (*Coleonyx brevis* Stejneger) although discovered in the first year of Marnock's collecting, was not diagnosed as new until fifteen years later. Cope described a garter snake from Helotes as *Thamnophis eques collaris* but the name has long since been relegated to the lumber room of which all species describers stand in dread—the synonymy. During his many years of collecting, Marnock obtained a large number of specimens, many of the rarer animals in series. He did some exchanging but at the time of his death, less than fifteen per cent of his collection was foreign material and most of this representing generic groups not found in Texas.

It was Marnock's intention to publish his notes on the herpetology of southwestern Texas but he delayed his purpose until too late in life. According to some of his friends, his relation to Helotes Creek was distinctly romantic. It seems that when a young man, he had been a collector of specimens for some of the British scientific institutions (he was an Englishman by birth) and it was in quest of material that he visited southwestern Texas on his route to Central America. In his wanderings, so the story goes, he chanced to visit Helotes Creek and became so enamoured of the spot that he decided to spend the balance of his life there. Later he married and reared a family of several children. He died February 4, 1920, at the age of eighty-four. The old stone house on the hill above the creek bed is still occupied by his widow. In one of the upper windows leans an old musket, relic of the days when horse-thieves and other desperadoes made the life of the settler an unenviable one and when it was always necessary to have the means of defense near at hand. The locality selected for the Marnock home, is, in the writer's opinion, one of the most beautiful in Bexar County. Even in summer, when a Texas sun shows little mercy, there is a wonderful coolness and freshness in the little pass through the hills and across the rippling creek. It was among the bluffs, within a short distance of his home, this nature lover's own little paradise, that Marnock collected his new species of frogs and lizards and many of his most interesting specimens of snakes.

After her husband's death, Mrs. Marnock presented a portion of his collection to the Scientific Society of San Antonio and sold the balance to the Baylor University Museum.

In addition to the Bexar County material from the Marnock collection, I am in possession of specimens collected at San Antonio by the late Messrs. Julius Hurter and Louis Garni. Mr. Hurter's visit to the section was a brief one and as a result only a very small collection was made by him. Mr. Garni was a teacher in St. Louis College located about five miles from San Antonio. He was an intelligent and enthusiastic naturalist and to his generosity the Baylor Museum is indebted for many specimens and his careful notes have been of great value in the compiling of the present list. Mr. Garni contracted tuberculosis and died in 1914.

Some years ago, Mr. Clement S. Brimley of Raleigh, North Carolina, sent me a list of the species of reptiles and amphibians that he had received from one of his correspondents at San Antonio and also a few specimens from there. Personally I have collected material in the near vicinity of San Antonio, and through the kindness of my friends, Messrs. R. C. Edgar and Buford Taylor, have been enabled to make trips along the San Antonio and Salado rivers and to various localities along the Babcock, Boerne and Leon Springs roads.

Of the eighty-nine species of amphibians and reptiles recorded in the present list, authentic Bexar County specimens of seventy-nine species are represented in the Baylor University collection. I have seen authentic Bexar County specimens of eight more species. One species has been recorded by reliable authorities but no specimens have been examined by me. *Uta ornata* Baird and Girard is also included as a Bexar County reptile on the basis of a single example obtained between San Antonio and Boerne by Louis Garni. This specimen may have been collected over the line in Kendall County but a close search will reveal the presence of other specimens on the Bexar County side of the line. Two of Marnock's species, represented by numerous specimens in unlabelled jars containing such common local reptiles as *Cnemidophorus gularis* and *Phrynosoma cornutum*, may possibly have been collected in Bexar County but I thought best to put them in the hypothetical list, for the present at least.

The reader who is not familiar with the frogs and toads listed in the present paper, will find excellent descriptions of all the species in Mary C. Dickerson's "Frog Book", published by Doubleday, Page and Company. The turtles, snakes and lizards are all described in "The Reptile Book" by Raymond L. Ditmars, same publisher. I have included descriptions of the five species of salamanders.

When I refer to a species as occurring in the vicinity of San Antonio, I mean that it has been found within a distance of five or six miles of the city. In the interest of space, I omitted the bibliography. The following works, however, were my most important sources of information in regard to Bexar County material collected prior to 1880:

Baird, Spencer F. and Charles Girard.
Catalogue of North American Reptiles, Part 1, Serpents, Wash., 1853.

Baird, Spencer F.
Reptiles of the Boundary. Rept. U. S. Mexican Boundary Survey, Wash., 1859.

Cope, E. D.
On the Zoological Position of Texas Bull. U. S. Nat. Mus., No. 17, 1880.
The Batrachia of North America Bull. U. S. Nat. Mus., No. 34, 1889.
The Crocodilians, Lizards and Snakes of North America Report U. S. Nat. Mus., 1898.

Yarrow, H. C.
Check-List of North American Reptilia and Batrachia Bull. U. S. Nat. Mus., No. 24, 1882.

AMPHIBIA

1. **Notophthalmus meridionalis** (Cope) Southern Newt
Diemyctylus miniatus subsp. **meridionalis** Cope,
Bull. U. S. Nat. Mus., No. 17, 1880, p. 30.

This is the socalled "water lizard". It is a small aquatic salamander with a total length of from 75 to 85 millimeters of which the head and body take up a trifle over one-half. The ground color of the uppersurfaces vary from olive to dull brown; the under surfaces are buff or yellow, marked with numerous small black spots. It differs from the eastern newt (*N. viridescens*) in having black instead of red spots in the dorsal region. This newt breeds in March and April. Some years ago, I had the opportunity of studying its breeding habits at Laguna Lake, Falls County, and observations made there indicate that these do not materially differ from those of the American Newt as described by Baird. Single eggs were found folded in immersed leaves in the smaller sloughs and the larvae were seined in small arms of these sloughs. These larval specimens were indistinguishable from those of *viridescens* from Raleigh, North Carolina.

Some years ago, Mr. C. S. Brimley sent me a specimen of this species which one of his correspondents had collected at San Antonio. Mr. Marnock obtained quite a number in the neighborhood of Helotes. It is probably more or less common in suitable localities throughout the county.

2. **Ambystoma microstomum** Cope. Small-mouthed Salamander
Ambystoma microstomum Cope, Proc. Acad. Nat. Sci.
Phila. 1861, p. 123.

This fine salamander sometimes attains a length of six inches or more. The tail is less than half the total length—about two-thirds the head and body. In build it is a more slender animal than the tiger salamander and its general make-up suggests *Ambystoma texanum* Matthes. From *texanum*, however, it differs in the absence of the yellow spots on the sides and in having dark undersurfaces. "The color in alcohol is a dark brownish black, a very little paler beneath, and thickly and irregularly sprinkled on the sides with plumbeous spots about the size of the eye, of no definite outline. These are less numerous above and below, sometimes nearly wanting; sometimes they are larger than as described, and look not unlike patches of grayish lichen growing on the sides." (Cope, Batrachia of North America, p. 102). It would not be an easy matter to improve on the above description of *alcoholic* specimens, but living examples are black and in many cases the markings are either white or grayish white. Specimens which have been long in alcohol fade to a dull brown.

This salamander is found in uplands as well as lowlands and on the prairie farms and flats, the heavy spring rains drive many from their underground retreats. It breeds in April, in sloughs, ponds and surface tanks. The larvae are very light in color. The late Louis Garni captured a single specimen in the St. Louis College natatorium near San Antonio and forwarded it to me for identification. It is probably a rare animal in Bexar County. No examples were in the Marnock collection.

3. **Ambystoma texanum** (Matthes) Texan Salamander
Salamandra texana Matthes, Allg. deutsche naturh. Zeitschr. Vol. 2, 1855, p. 266.

This salamander is still rare in collections. Judging from notes on the recorded specimens, it is rather smaller on the average than *microstomum* but it resembles that species in many particulars. The color, however, is very different. The upper surfaces are light brown, with a series of small, light spots along the upper part of the sides. In half-grown examples collected by me and now in the Field Museum of Natural History, these spots were yellowish in the living animal. The sides and belly are yellow. Its habits resemble those of the Small-mouthed Salamander to which it is very closely related. It breeds in April, usually in prairie ponds and surface tanks, but on one occasion I found numerous larval specimens in ditches along a railroad track in an overflow district.

Eleven juvenile specimens from San Antonio, collected by Col. J. D. Graham, are in the United States National Museum. Julius Hurter collected a single adult specimen in the same locality and this is probably in the same institution.

4. **Ambystoma tigrinum** (Green) Tiger Salamander
Salamandra tigrina Green, Acad. Nat. Sci. Phila., Vol. 5, 1825, p. 116.

The tiger salamander is distributed over the greater portion of the area of Texas but is most abundant in the western and southwestern sections. East of the Brazos river, it is very locally distributed. It is the largest and most abundant of the three species of *Ambystoma* that has so far been recorded from Bexar County. Specimens from the western counties sometimes attain a length of ten inches. The color is variable. In life the back is livid blackish brown with spots or elongated blotches of yellow. In some specimens, these markings are almost entirely absent, in others, they almost obscure the ground color. Both adult and larval tiger salamanders are known as "water dogs." Specimens of the larvae from the Texas plains region are fully as large as good sized Mexican axolotls but lack the black punctulations. These larval specimens are very abundant in the ponds and small lakes of the plains and trans-Pecos regions and probably also in most of the southwestern counties.

The tiger salamander breeds early in the year. In the dry season, the adults retire to the deserted habitations of prairie dogs, badgers and other burrowing mammals but usually make their reappearance on the occasion of the first heavy shower. The metamorphosis from the larval to the land form takes place late in the summer, usually about the last of August. According to Cope, the larvae are very rapacious, eating animal food and taking the hook readily. Examples from ponds near Barstow, Texas, are unusually large and plump, while those from a deep, rock-bound water pocket in an adjoining county are more slender and only about half the size. The cold water and the scantiness of the food supply in this water pocket probably retarded their development.

All of the tiger salamanders from Bexar County that I have personally examined, were collected in the Helotes neighborhood by Mr. Marnock. One adult and one larval specimen are in the collection of the Scientific Society and three adults and one larval specimen in the Baylor Museum.

5. **Plethodon glutinosus** (Green) Slimy Salamander
Salamandra glutinosa Green, Journ. Acad. Nat. Sci.
Phila., Vol. 1, part 2, Sept. 1818, p. 357

This salamander is entirely terrestrial in its habits and does not enter the water to breed but deposits its eggs in damp places in the woods. It usually haunts rocky localities and is most abundant in the mountain districts of the eastern States. The total length of a well grown adult is from five and a half to six inches. The color is black or bluish black. "The upper parts and sides are marked with well-defined specks of a grayish-silvery color, looking like torn pieces of foil. These vary with the specimen, but are generally more numerous and larger on the sides. The underparts are sometimes finely dotted with whitish, but this is usually the effect of the whitish glands seen through the integument. The under part of the tail is a pale bluish gray. A light spot on the chin..................Form stout, the body depressed, the head, body and tail continuous, with very little constriction at the neck; the tail cylindrical, very slightly compressed towards the pointed conical tip, and longer than the body" (Cope, "The Batrachia of North America", pp. 139. 141). I quote much of Cope's description of the form and coloration of this species so that Bexar County nature students will have no difficulty in distinguishing it from the two smaller species of *Ambystoma*.

Twenty specimens of this species collected by Mr. Marnock in the region about Helotes are in the collections of Baylor University and the Scientific Society of San Antonio.

6. **Scaphiopus couchii** Baird Couch's Spadefoot
Scaphiopus couchii Baird, Proc. Acad. Nat. Sci. Phila., Vol. 7, 1854, p. 62.

Mr. Marnock obtained numerous specimens of this species at Helotes. Mr. Garni reported it as common on the grounds of St. Louis College "during the toad days" (the rainy season). It is rather abundant within the city limits of the city of San Antonio. I collected several in July, 1915, and Mr. Hurter collected a large series after a heavy rain storm when the water had driven them from their subterranean haunts. In many sections of Texas, this spadefoot is shown by the vernacular name of "rain toad", a name commonly applied to the chameleon tree frog (*Hyla versicolor*) in more eastern sections of the country.

7. **Scaphiopus hammondii** Baird Western Spadefoot
Scaphiopus hammondii Baird, Rept. Pacific R. R. Surv., Vol. 10, Pt. 4, 1875, p. 12.

Mr. Marnock is supposed to have collected this species in the neighborhood of Helotes (Dickerson, "The Frog Book", p. 60) but I found no specimens in his collection. Mr. Garni collected one specimen near San Antonio and sent it to me for identification.

8. **Bufo woodhousii** Girard. Woodhouse's Toad
Bufo woodhousii Girard, Proc. Acad. Nat. Sci. Phila., Vol. 7, 1854, p. 86.

This toad is usually considered the western representative of *Bufo americanus* Holbrook and given varietal rank under that species but Stejneger and Barbour have dropped the trinominal and given it full specific rank—temporarily, at least. *Woodhousii* is larger and darker than *americanus* and in the rather limited series at my disposal, seems to differ considerably from the eastern toad in the structure of the bony crests and in the shape of the paratoids.

Woodhousii is less common in Bexar County than either *valliceps* or *compactilis.* I found only two specimens in the Marnock collection. A specimen from San Antonio is in the Scientific Society Museum and Louis Garni included it in his list of San Antonio amphibians. I personally collected two specimens along the San Antonio River, several miles from the city.

9. **Bufo compactilis** Wiegmann Spadefoot Toad
Bufo compactilis Wiegmann, Isis, 1833, p. 661

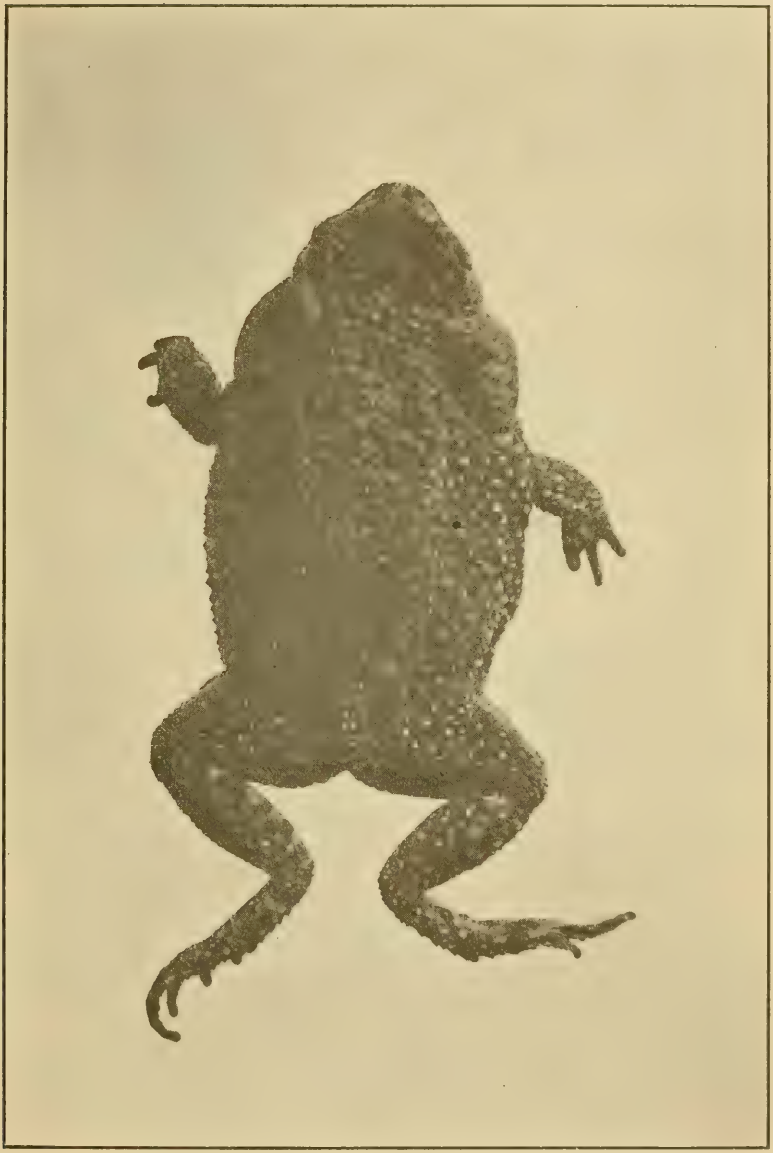
This species and *Bufo valliceps* are the most abundant toads in the vicinity of San Antonio. Numerous specimens were in the Marnock collection and others have been collected by Hurter, Garni and the writer. Under dead branches in a flat along the Salado River, I found a large number of young specimens only about an inch in length. It is usually abundant in damp weather. It breeds in temporary pools and in its general habits is more like a *Scaphiopus* than a true toad.

10. **Bufo debilis** Girard Little Green Toad
Bufo debilis Girard, Proc. Acad. Nat. Sci. Phila., Vol. 7, 1854, p. 87.

Louis Garni found this interesting little toad common on the areas around the St. Louis College buildings during the heavy fall rains. He also collected several in the college natatorium. The four specimens he presented to the Baylor Museum are the largest in the collection, being almost as large as average sized *Bufo punctatus.* Adult specimens from Helotes, collected by Marnock, are hardly more than an inch in length.

11. **Bufo punctatus** Baird and Girard Spotted Toad
Bufo punctatus Baird and Girard, Proc. Acad. Nat. Sci. Phila., Vol. 6, 1852, p. 173.

This toad is closely related to *Bufo debilis* but its habits are different from those of that species. *Debilis* prefers open country, usually mesquite-covered flats, and breeds in ditches and wayside pools. *Punctatus* is partial to rocky localities, especially high bluffs enclosing small streams. Here it breeds in rockbound pools. I have found specimens under rocks on the tops of cave-lined bluffs during the excessive heat of midsummer. *Punctatus* occurs in suitable localities throughout Bexar County. I found six from Helotes in the Marnock collection; two of these were unusually large. Edgar and I found an adult under a stone on the side of the Babcock road, 18 miles from



LITTLE GREEN TOAD
(**Bufo debilis** Girard)
San Antonio, Texas
An unusually large specimen

San Antonio. A specimen from the environs of San Antonio is in the Scientific Society collection.

12. **Bufo valliceps** Wiegmann Nebulous Toad
Bufo valliceps Wiegmann, Isis, 1833, p. 657.

This toad is abundant throughout Bexar County. Mr. Marnock collected numerous examples in the vicinity of Helotes and every collector who has worked around San Antonio reports finding it common. In some localities it inhabits rocky gulches where it hides in caves and fissures; in others it seems to prefer flat open country, and in some of the larger towns and cities commonly congregates around the street lights. In extreme eastern Texas, it is a common species in the pine forests.

13. **Acris gryllus** (LeConte) Cricket Frog.
Rana gryllus LeConte, Ann. Lyc. New York, Vol. 1, Pt. 2, 1825, p. 282.

Abundant throughout the county, in the vicinity of streams, springs and ponds. I have specimens from Helotes, several localities in the vicinity of San Antonio, and Leon Springs.

14. **Pseudacris ornata** (Holbrook) Ornate Chorus Frog
Rana ornata Holbrook, N. Am. Herp., Ed. 1, Vol. 1, 1838 p. 97, pl. 16.

This beautiful chorus frog is abundant in the vicinity of Helotes where Mr. Marnock collected a large series of specimens. Louis Garni obtained several specimens near San Antonio.

15. **Pseudacris triseriata** (Wied) Striped Chorus Frog
Hyla triseriata Wied, Reise Nord-Amer., Vol. 1, Pt. 4, 1838, p. 249.

Three specimens of this species were in the Marnock collection, in a jar containing a number of *Pseudacris ornata* from Helotes. It is probably found throughout the county but on account of its small size and secretive habits has been overlooked by other collectors.

16. **Hyla baudinii** Dumeril and Bibron. Mexican Tree Frog
Hyla baudinii Dumeril and Bribron, Erp. Gen., Vol. 8, 1841, p. 564.
Smilisca baudinii Dumeril and Bibron (Cope)

This fine tree frog is very locally distributed. In 1880, Cope in his essay "On the Zoological Position of Texas" (Bull. U. S. Nat. Museum, No. 17) states that this species inhabits the low country southeast of San Antonio, commencing with San Miguel Creek, a tributary to the Medina. Later, Marnock sent a specimen from Helotes to the National Museum. I found four fine specimens in the Marnock collection. Two of these are about the size of an adult *Hyla versicolor* while the other two are much larger.

17. **Hyla cinerea** (Schneider) Green Tree Frog; Bell Frog
Calamita cinereus Schneider, Hist. Amph., Vol. 1, 1799, p. 174.
Hyla carolinensis semifasciata Cope

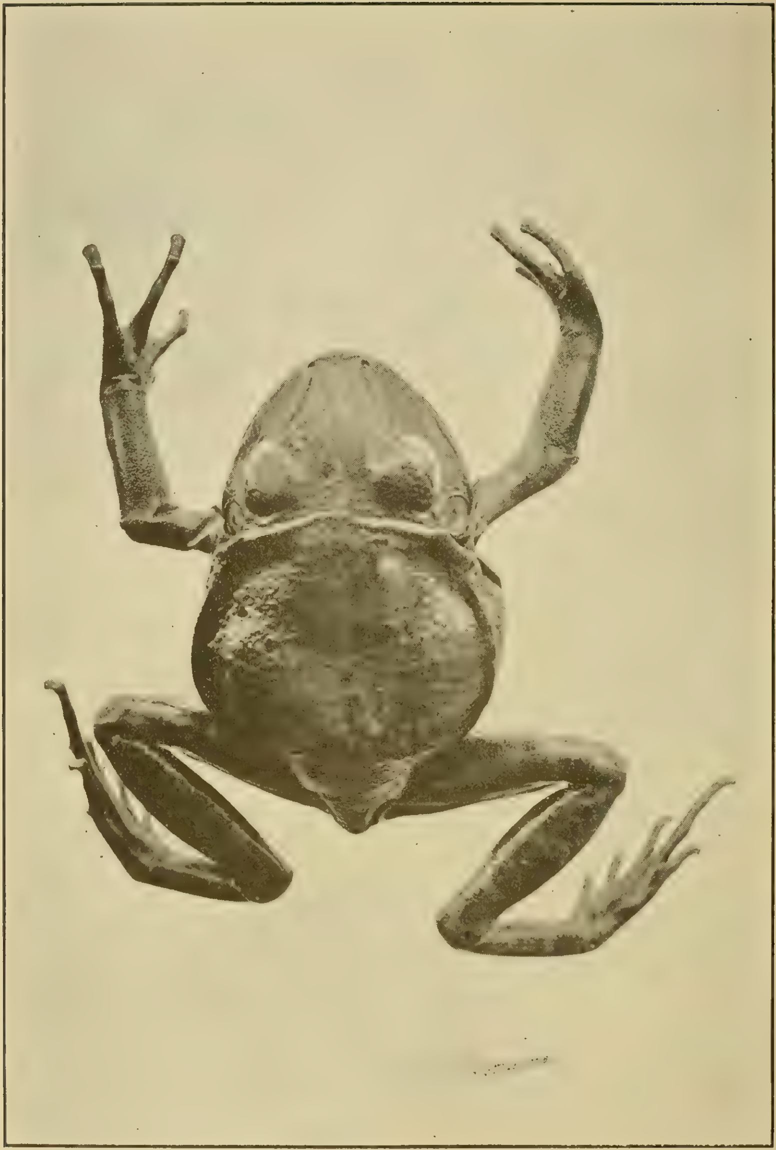
This species has been collected in several localities by a number of collectors. Several from San Antonio are in the United States National Museum and were collected by J. H. Clark about the year 1854. The Baylor University Museum contains one specimen from San Antonio, received from C. S. Brimley, two from St. Louis College campus, ten miles from the city; and several from Helotes, collected by Mr. Marnock.

18. **Hyla squirella** Latreille Spotted Tree Frog
Hyla squirella Latreille, Hist. Nat. Rept., Vol. 2, 1802, p. 181.

Louis Garni, sent me an example of this species, accompanied by the following note: "Found two specimens in the areas around the (St. Louis) college buildings during the days of the heavy rains last fall." This seems to be the only record for Bexar County. I found no specimens in the Marnock collection.

19. **Hyla versicolor versicolor** Le Conte Tree Toad
Hyla versicolor Le Conte, Ann. Lyc. New York, Vol. 1, Pt. 2, 1821, p. 281.

In Texas, this tree toad is principally an inhabitant of the extreme eastern counties. It occurs locally in the coast country as far south as Refugio and Victoria counties, and typical specimens have been recorded from the interior as far as New Braunfels. Mr. C. S. Brimley wrote me some years ago that he had received tree toads from San Antonio that he considered more nearly *versicolor* than its subspecies *chrysoscelis*. However, he stated that they were by no means typical of the former subspecies. In the Marnock collection, in a jar containing specimens of *Hyla baudinii,* I found one specimen which I consider a typical *versicolor*. In this specimen, the upper surfaces are very tubercular and the color pattern is identical with that of eastern specimens. This specimen is probably from Helotes as the other specimens in the jar were from there.



ROBBER FROG
(**Eleutherodactylus latrans** Cope)
Helotes, Texas
Natural size

20. Hyla versicolor chrysoscelis Cope. Western Tree Frog

Hyla femoralis chrysoscelis Cope, Bull. U. S. Nat. Mus., No. 17, 1880, p. 29.

Five specimens from Helotes were in the Marnock collection. These specimens are perfectly smooth above and resemble in every particular typical specimens of *chrysoscelis* from the type locality. This is the common *Hyla* of middle and northern Texas.

21. Eleutherodactylus latrans (Cope) Robber Frog: Barking Frog

Lithodytes latrans Cope, Bull. U. S. Nat. Mus., No. 17 1880, p. 25.

This interesting amphibian was described from specimens collected at Helotes by Marnock. Judging from the number of fine examples in the Marnock collection, it is not at all uncommon.

22. Syrrhopus marnockii Cope Marnock's Frog

Syrrhopus marnockii Cope, Am. Nat., Vol. 12, 1878, p. 253

The type locality for this species is given as "near San Antonio, Texas" but the types were really from the vicinity of the Marnock homestead on Helotes Creek. Like *Eleutherodactylus latrans,* this frog inhabits limestone bluffs. Although discovered more than forty years ago, it has not been found in any other locality.

23. Rana catesbeiana Shaw Bullfrog

Rana catesbeiana Shaw, Gen. Zool., Vol. 3, Pt. 1, 1802 p. 106, fig. 108.

The bullfrog is a common species in Bexar County.

24. Rana pipiens Schreber Leopard Frog

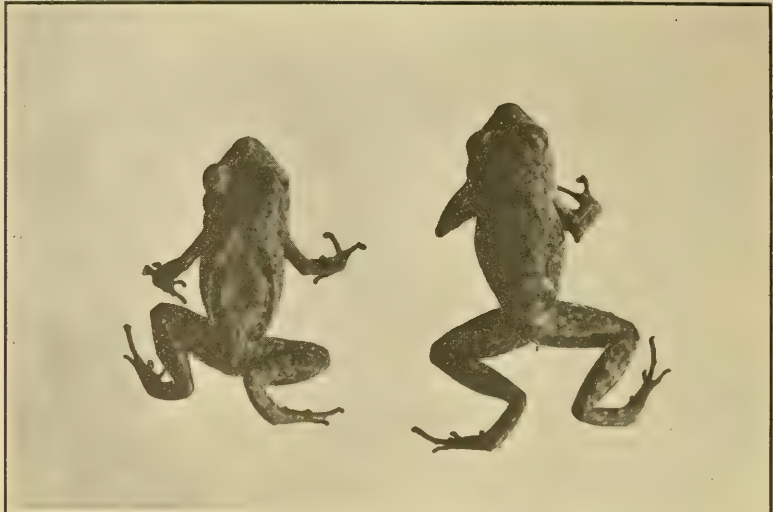
Rana pipiens Schreber, Naturforscher, Vol. 18, 1782, p. 185, pl. 4.

Generally distributed throughout the county. Very abundant in the San Antonio and Salado rivers and in Helotes Creek and other small streams.

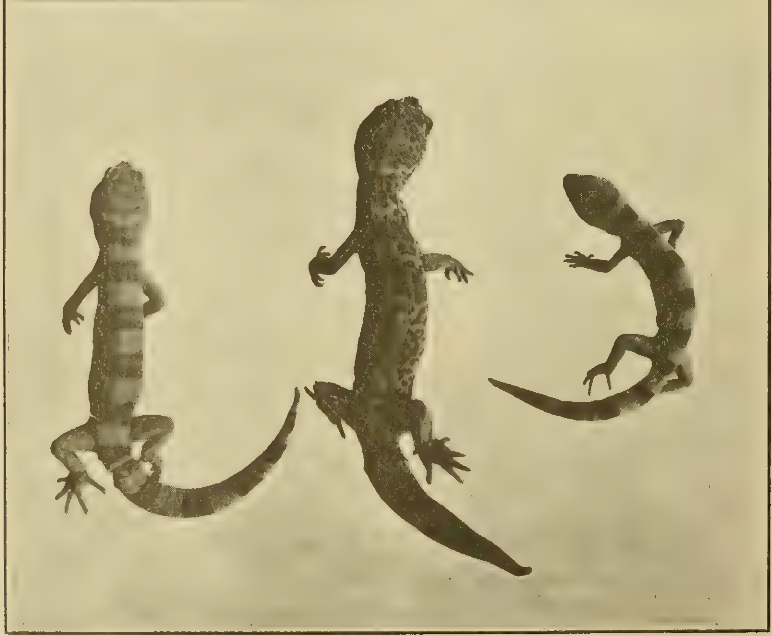
25. Gastrophryne texensis (Girard) Texas Toothless Frog

Engystoma texense Girard, Proc. Acad. Nat. Sci. Phila., 1859, p. 169.

Cope did not recognize this tiny species and recorded the toothless frog of Bexar County under the name of *Engystoma carolinense*, which is entirely distinct from Girard's species. *Texensis* is distributed in suitable localities all over Bexar County. I have eight from Helotes, several from the St. Louis College grounds and a number that I personally obtained while on clamming trips along the San Antonio and Salado rivers. Cope mentions *carolinense* (?) from the city of San Antonio.



MARNOCK'S FROG
(**Syrrhopus marnockii** Cope)
Helotes, Texas
Natural size



BANDED GECKO
(**Coleonyx brevis** Stejneger)
Helotes, Texas
Natural size

REPTILIA

26. **Alligator mississippiensis** (Daudin) Alligator
Crocodilus mississippiensis Daudin, Hist. Nat. Rept. Vol. 2, 1803, p. 412.

The first reference to the alligator as a Bexar County reptile is that of Cope (Bull U. S. Nat. Mus., No. 17, p. 13). He states that ''it is occasionally seen in the San Antonio River, within the limits of the City of San Antonio''. This was written many years ago but I am reliably informed that a few specimens of the great saurian are still to be found in the county. I have a young example from the Marnock collection. The label on the jar was merely Bexar County.

27. **Coleonyx brevis Stejneger,** Banded Gecko
Coleonyx brevis Stejneger, N. Am. Fauna, No. 7, 1893, p. 163.

The type of this species was collected at Helotes by Marnock. Cope first recorded it under the name of *Eublepharis variegatus* but thirteen years later, Dr. Stejneger, in going over the series of *Eublepharis* (*Coleonyx*) in the National Museum, discovered that the material represented two distinct species and distinguished the Texan form by the name of *brevis.*

This little gecko is abundant in the vicinity of Helotes and has been collected within two or three miles of San Antonio. It is found in rocky places and the specimens represent two types—one banded, the other spotted. The majority of Marnock's specimens were of the banded form.

28. **Crotaphytus collaris collaris** (Say) Ring-necked Lizard: Collared Lizard.
Agama collaris Say,Long's Exped. Rocky Mts., Vol. 2, 1823, p. 252.

''Plateau country near San Antonio, in the rocks and open woods'' (Cope, Bull. U. S. Nat. Mus., 1880, No. 17, p. 14.) This large and handsome lizard, known in different localities by such vernacular names as mountain boomer, bull lizard, glade devil, gray nelly and gray bitch, is a rather common species along all of the rocky roads leading out from San Antonio. Marnock obtained numerous specimens in the Helotes neighborhood.

29. **Holbrookia maculata lacerata** (Cope)
Boll's Spotted Lizard

Holbrookia lacerata Cope, Bull. U. S. Nat. Mus., No. 17, 1880, p. 15.

This is probably the spotted lizard recorded from Bexar County by Baird, Cope and other writers, under the name of *Holbrookia maculata* Girard. The variety *lacerata* inhabits Comal, Kerr and Comal counties and probably the whole middle district of Texas while typical *maculata* is the form found throughout the western district including the panhandle, the plains and trans-Pecos Texas. Spotted lizards from San Antonio in the National Museum, collected by Col. J. D. Graham, were listed as *maculata* by Cope and Yarrow, but this was before Cope described *lacerata*. Several specimens in the Marnock collection are referable to Cope's subspecies. I have not examined specimens from any other section of the county.

30. **Holbrookia propinqua** Baird and Girard
Long-tailed Spotted Lizard

Holbrookia propinqua Baird and Girard, Proc. Acad. Nat. Sci. Phila., Vol. 6, 1852, p. 126.

The types of this species came from "south of San Antonio" and may or may not have been collected in Bexar County. Marnock collected it near Helotes and the Baylor University Museum has seven of his specimens.

31. **Holbrookia texana** Troschel Texan Spotted Lizard

Cophosaurus texanus Troschel, Arch. Naturg , Vol. 1, 1850 (1852), p. 389, pl. 6.

First collected at San Antonio by Dr. C. B. Kennerley (Specimens in the National Museum). It is abundant in the vicinity of Helotes, Garni obtained it three miles north of St. Louis College and I have specimens from the Leon Springs and Babcock roads leading out from San Antonio. It is probably distributed in suitable localities throughout the county.

32. **Uta ornata** Baird and Girard Ornate Lizard

Uta ornata Baird and Girard, Proc. Acad. Nat. Sci. Phila., Vol. 6, 1852, p. 126.

Recorded by Cope from the tributaries of the Medina River under the name of *Uta symmetrica* Baird. Louis Garni collected an example between San Antonio and Boerne but was not certain whether in Bexar or Kendall County.

33. **Sceloporus consobrinus consobrinus** Baird and Girard
Fence Lizard
Sceloporus consobrinus Baird and Girard, Marcy's Expl. Red River, 1853, Reptiles, p. 237, Zool., pl. 10.

Cope recorded specimens of this species from San Antonio under the names *Sceloporus consobrinus* Baird and Girard and *Sceloporus thayerii* Baird and Girard. It is common in many parts of Bexar County. A large series from the Helotes neighborhood was in Marnock's collection, Garni obtained it near St. Louis College, and I found it common on rocks 14 miles from San Antonio on the Leon Springs road.

34. **Sceloporus spinosus floridanus** (Baird) Tree Lizard
Sceloporous floridanus Baird, Proc. Acad. Nat. Sci. Phila., 1858, p. 254.

"Very common, especially in woodpiles of cut mesquite. Also in mesquite "woods"; such trees as have a hole at the base either into the ground or hollow part of root or tree, are greatly patronized by these lizards. Many people around here consider them poisonous; some were even under the impression that the lizards could harm you with the points of its scales". (Garni, mss.).

Many specimens from San Antonio and Helotes are in various museum collections. These were collected by Dr. Woodhouse, Lieut. Whipple, C. W. Schuermann, Julius Hurter, G. W. Marnock and several others whose names I do not now recall. Probably every collector of herpetological specimens who has visited the region about San Antonio has collected a series of these lizards.

35. **Sceloporus torquatus poinsettii** (Baird and Girard)
Poinsett's Lizard
Sceloporus poinsettii Baird and Girard, Proc. Acad. Nat. Sci. Vol. 6, 1852, p. 126.

Mr. Marnock obtained specimens of this species near Helotes. One specimen from the vicinity of San Antonio is in the Scientific Society collection.

36. **Sceloporus variabilis** Wiegmann Variable Lizard
Sceloporus variabilis Wiegmann, Herp. Mexico, 1834, p. 51.

Mr. Garni sent me an interesting series of these lizards which he collected on the grounds of St. Louis College. Accompanying them were the following notes: "Found in common with the *Sceloporus floridanus* but in greater numbers. Every warm day that comes along in winter a few of these lizards are sure to be seen, either at the bases of the mesquite or in woodpiles''. Cope records this species from Helotes under the name of *Sceloporus scalaris* Wiegmann but I found no specimens in the Marnock collection. Fourteen miles from San Antonio in the direction of Leon Springs, I found several of these lizards on rocks along the base of a limestone bluff. In some of the southwestern counties this species lives among prickly-pear plants.

37. **Phrynosoma cornutum** (Harlan) Horntoad: Texas Horned Lizard.
Agama cornuta Harlan, Journ. Acad. Nat. Sci. Phila., Vol. 4, 1825, p. 299, pl. 20.
Common throughout the county.

38. **Ophisaurus ventralis** (Linne) Joint Snake: Glass Snake
Anguis ventralis Linne, Syst. Nat., Ed. 12, 1766, p. 391.

Mr. Marnock collected several specimens in the neighborhood of Helotes. It has not been recorded from San Antonio but probably occurs there. It is rather common in Kerr, Kendall, Comal and other counties in the district and will probably be found throughout Bexar County.

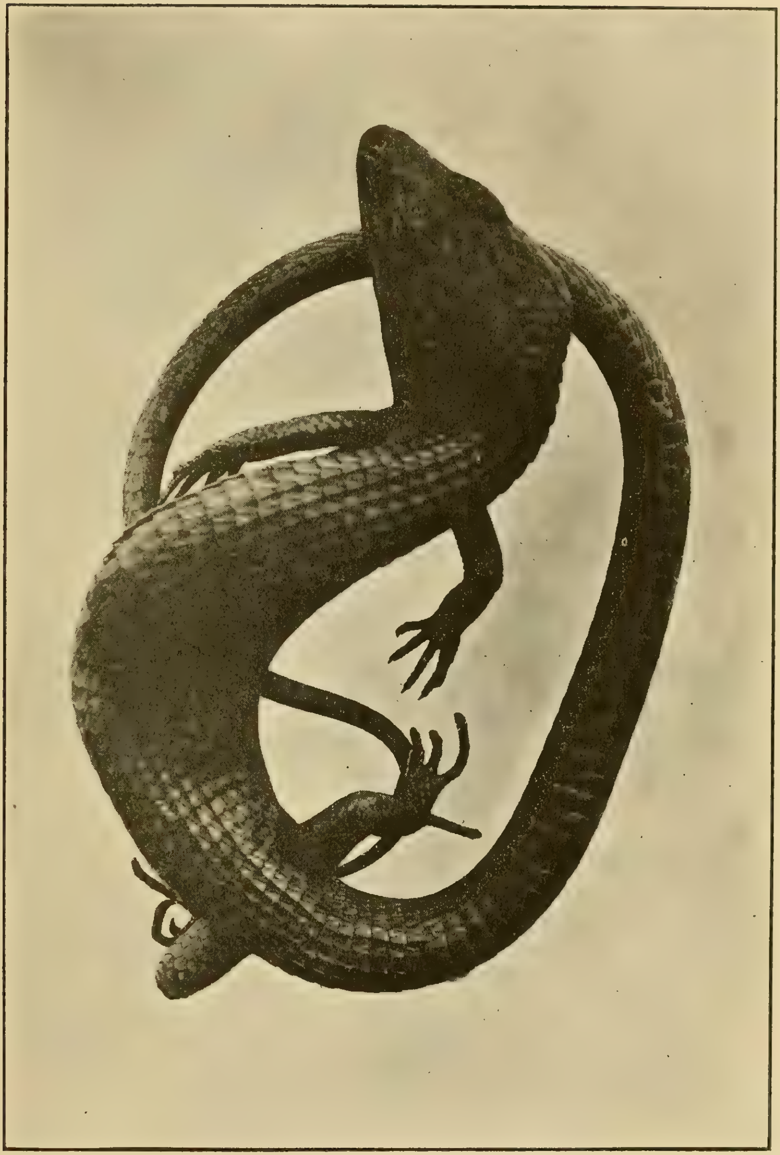
39. **Gerrhonotus infernalis** Baird Plated Lizard
Gerrhonotus infernalis Baird, Proc. Acad. Nat. Sci. Phila., 1858, p. 255.

Mr. Marnock collected nearly a dozen examples of this rare lizard at Helotes. The Scientific Society collection contains a fine specimen from a point fifteen miles from San Antonio on the Blanco road, collected by the late Dr. R. Menger.

40. **Cnemidophorus gularis** Baird and Girard Western Lined Lizard: Striped Race-runner
Cnemidophorus gularis Baird and Girard, Proc. Acad. Nat. Sci. Phila., Vol. 6, 1852, p. 128.
Common throughout the county.

41. **Leiolepisma laterale** (Say) Ground Lizard
Scincus lateralis Say, Long's Exped. Rocky Mts., Vol. 2, 1823, p. 324.

This species was first obtained at San Antonio by Dr. C. B. R. Kennerley and Lieut. Whipple. Louis Garni, in his manuscript list of San Antonio reptiles, mentions two collected near the first mission. The Baylor University collection contains one from Helotes and several others from the woods and parks along the Salado and San Antonio rivers.



PLATED LIZARD
(**Gerrhonotus infernalis** Baird)
Helotes, Texas
Natural size

42. **Plestiodon brevilineatus** (Cope) Short-lined Skink
Eumeces brevilineatus Cope, Bull. U. S. Nat. Mus., No. 17, 1880, p. 18.

Marnock collected the types of this species near Helotes. Seven specimens from the same locality and collector are in the Baylor University collection and one in the museum of the Scientific Society. The last mentioned specimen was labelled *Eumeces inornatus* Baird by Mr. Marnock, who presented it to the society. Louis Garni collected this species in Kendall County only a short distance from the Bexar County line. It is probably widely distributed in Bexar County in all of the rocky districts.

43. **Plestiodon obsoletus** Baird and Girard Sonoran Skink
Plestiodon obsoletum Baird and Girard, Proc. Acad. Nat. Sci. Phila., Vol. 6, 1852, p. 129.

This interesting skink is found in suitable localities throughout Bexar County. A small series from Helotes, collected by Mr. Marnock, is most interesting as it includes specimens of all ages and types. Stejneger and Barbour are probably right in their suggestion that *Plestiodon guttulatus* Hallowell is the young of this species. One of the young examples from Helotes is almost indistinguishable from a *guttulatus* of the same age from El Paso.

44. **Leptotyphlops dulcis** (Baird and Girard) Worm Snake
Rena dulcis Baird and Girard, Cat. N. Am. Rept., Pt. 1, 1853, p. 142.

This tiny, worm-like serpent is abundant in many sections of Bexar County. Mr. Brimley has received it from the City of San Antonio, Mr. Garni found it common on the grounds of St. Louis College and Mr. Marnock collected a large number at Helotes. I found quite a number under stones on hills and along stream beds a short distance out from San Antonio.

45. **Diadophis regalis** Baird and Girard Regal Ring-necked Snake
Diadophis regalis Baird and Girard, Cat. N. Am. Rept., Pt. 1, 1853, p. 115.

This species is abundant in the vicinity of Helotes but has not been recorded from any other part of the county. Among the specimens in an unlabelled jar in the Marnock collection, I found several specimens of *Diadophis arnyi* Kennicott. These may have been collected in Bexar County but I am doubtful about it.

46. **Heterodon contortrix** (Linne) Hog-nose Snake. Spreading Adder

Boa contortrix Linne, Syst. Nat., Ed. 12, Vol. 1, 1766. p. 373.

Mr. Marnock collected several in the Helotes neighborhood and Mr. Garni records a single specimen from San Antonio.

47. **Opheodrys aestivus** (Linne) Rough Green Snake: Southern Green Snake

Coluber aestivus Linne, Syst. Nat. Ed. 12, Vol. 1, 1766, p. 387.

Common in the wooded districts of Bexar County.

48. **Coluber flagellum flagellum** (Shaw) Coachwhip: Whip Snake

Coluber flagellum Shaw, Gen Zool., Vol. 3, 1802, p. 475.

A common species throughout Bexar County.

49. **Coluber constrictor flaviventris** (Say) Western Racer: Yellow-bellied Racer.

Coluber flaviventris Say, Long's Exped. Rocky Mts., Vol. 2, 1823, p. 185.

The Baylor University collection contains a small example of this species from near Helotes. I can find no published records of its occurrence in Bexar County but several have been reported from Comal and Kendall counties.

50. **Coluber schotti** (Baird and Girard) Schott's Racer

Masticophis schotti Baird and Girard, Cat. N. Am. Rept.. Pt. 1, 1853, p. 160.

Mr. Marnock collected several specimens of this rare species in the Helotes neighborhood. Two small examples are in the collection of Baylor University.

51. **Salvadora grahamiae** Baird and Girard Patch-nose Snake

Salvadora grahamiae Baird and Girard, Cat. N. Am. Rept., Pt. 1, 1853, p. 104.

Mr. Garni collected five specimens of this interesting snake on the grounds of St. Louis College, ten miles from San Antonio. Two of these he presented to Baylor University. Four specimens collected by Marnock at Helotes are in the collection of the same institution.

52. **Elaphe obsoleta confinis** (Baird and Girard)
Gray Pilot Snake: Chicken Snake
Scotophis confinis Baird and Girard, Cat. N. Am. Rept., Pt. 1, 1853, p. 76.

This species has been collected at San Antonio by Messrs. Hurter and Garni.

53. **Elaphe obsoleta lindheimerii** (Baird and Girard)
Lindheimer's Pilot Snake
Scotophis lindheimerii Baird and Girard, Cat. N. Am. Rept. Part 1, 1853, p. 74.

Mr. Marnock collected a number of specimens at Helotes. I found a large freshly-killed specimen on the road not far from Helotes Creek.

54. **Elaphe laeta** (Baird and Girard) Emory's Pilot Snake
Scotophis laetus Baird and Girard, Cat. N. Am. Rept., Pt. 1, 1853, p. 77.

This is an abundant species in Bexar County. Marnock found it common in the vicinity of Helotes and several collectors have reported it from San Antonio. Mr. Garni collected two specimens in the coal bin in the kitchen of St. Louis College.

55. **Arizona elegans** Kennicott, Elegant Snake
Arizona elegans Kennicott, U. S. & Mex. Bound. Surv. Vol. 2, 1859, p. 18, pl. 13.

Julius Hurter obtained a specimen of this species near San Antonio.

56. **Pituophis sayi** (Schlegel) Bull Snake
Coluber sayi Schlegel, Essai Physion. Serp., Vol. 2, 1837, p. 157.

This species has been collected at San Antonio and Helotes and is probably common throughout the county.

57. **Lampropeltis getulus splendida** (Baird and Girard)
Splendid King Snake
Ophibolus splendidus Baird and Girard, Cat. N. Am. Rept., 1853, Pt. 1, 83.

The king snakes of the *Lampropeltis getulus* group have recently been reviewed in Mr. Frank N. Blanchard's admirable monograph, "A Revision of the King Snakes: Genus Lampropeltis" (Bull. U. S. Nat. Mus., 1921, No. 114), and there is no longer any question of the identity of the Bexar County form. The seven specimens examined by me are clearly referable to *splendida* as defined by Mr. Blanchard. Cope referred to specimens from San Antonio and Helotes under the names *getula* and *splendida;* and other writers, myself included, have called the Bexar County snake *holbrooki* (or *sayi*, as it was formerly known). *Holbrooki* is common in eastern and east-central Texas but Austin and Burnet probably furnish the western-most records for authentic specimens.

58. **Lampropeltis triangulum amaura** (Cope)
Red King Snake

Lampropeltis amaura Cope, Proc. Acad. Nat. Sci. Phila., 1860, p. 216.

One adult and several juvenile specimens from Helotes were in the Marnock collection.

59. **Lampropeltis triangulum gentilis** (Baird and Girard)
Annulated King Snake

Ophibolus gentilis Baird and Girard, Cat. N. Am. Rept., Pt. 1, 1853, p. 90.

This subspecies, one of the most beautiful of king snakes, has been collected at Helotes by Marnock. Two of his specimens are in the Baylor University Museum and one in the Scientific Society collection. The latter was presented to the Society by Mr. Marnock who at the time was under the impression that the specimen represented a new species and labelled it "*Ophibolus sp. nova*". It is an extreme variation and at a first glance, reminds one of one of the forms of *Lampropeltis pyromelaena* (Cope).

60. **Rhinocheilus lecontei** Baird and Girard -LeConte's Snake

Rhinocheilus lecontei Baird and Girard, Cat. N. Am. Rept., Pt. 1, 1853, p. 120.

This species is rather common and has been collected in several sections of the county. In a small series in the Marnock collection, all of the principal variations in color pattern are represented. Mr. Hurter obtained an unusually large specimen near San Antonio.

61. **Sonora episcopa** (Kennicott) Miter Snake

Lamprosoma episcopum Kennicott, U. S. Mex. Bound. Surv., 1859, Vol. 2, p. 22, pl. 8, fig. 2.

This species has been collected at Helotes but must be rare, for I found only a single specimen in the Marnock collection.

62. Natrix grahamii (Baird and Girard) Graham's Water Snake

Regina grahamii Baird and Girard, Cat. N. Am. Rept., Pt. 1, 1853, p. 47.

The type of this species was collected on the Salado River, Bexar County, by Col. J. D. Graham. It has also been collected in the San Antonio River and Helotes Creek. Louis Garni mentioned the capture of a specimen on the St. Louis College campus, away from water.

63. Natrix rhombifera (Hallowell) Diamond Water Snake

Tropidonotus rhombifer Hallowell, Proc. Acad. Nat. Sci. Phila., Vol. 6, 1852, p. 177.

Common in rivers and small streams throughout the county.

64. Natrix sipedon transversa (Hallowell) Hallowell's Water Snake

Tropidonotus transversus Hallowell, Proc. Acad. Nat. Sci. Phila., Vol. 6, 1852, p. 177.

This is the most abundant water snake in Bexar County. It is found in large and small water courses.

65. Storeria dekayi (Holbrook) DeKay's Snake

Tropidonotus dekayi Holbrook, N. Amer. Herp., Ed. 2, Vol. 4, 1842, p. 53, pl. 14.

A rather common species in woods in the vicinity of rivers and streams. I have specimens from San Antonio and Helotes.

66. Virginia elegans Kennicott Elegant Virginia

Virginia elegans Kennicott, Proc. Acad. Nat. Sci. Phila., 1859, p. 99.

Mr. Marnock collected several specimens at Helotes. I have two which I collected a short distance from San Antonio, on the road to the hot wells.

67. Thamnophis eques (Reuss) Brown Garter Snake

Coluber eques Reuss, Mus. Senckenberg. Abh. Vol. 1, 1834, p. 152, pl. 8.

The United National Museum has specimens of this species from San Antonio and Helotes and others from the same localities are represented in the collections of Baylor University and the Scientific Society of San Antonio.

68. **Thamnophis marcianus** Baird and Girard.
Marcy's Garter Snake
Eutainia marciana Baird and Girard, Cat. N. Am. Rept., Pt. 1, 1853, p. 36.

This is one of the most abundant snakes in Bexar County and is usually known as the "speckled mouse snake".

69. **Thamnophis proximus** (Say) Long's Garter Snake
Coluber proximus Say, Long's Exped. Rocky Mts., Vol. 1, 1823, p. 187.

Common throughout Bexar County.

70. **Thamnophis sirtalis sirtalis** (Linne) Common Garter Snake
Coluber sirtalis Linne, Syst. Nat,. Ed. 10, Vol. 1, 1758, p. 222.

A specimen in the Scientific Society collection from Helotes, G. W. Marnock, collector, is of the spotted form somewhat resembling *eques* but without the black nuchal spots and characteristic head markings of that species.

71. **Tantilla gracilis** Baird and Girard Graceful Tantilla
Tantilla gracilis Baird and Girard, Cat. N. Am. Rept., Pt. 1, 1853, p. 132.

Common throughout the county. I found specimens under stones on rocky hillsides and under logs and strips of bark in woods near streams.

72. **Tantilla planiceps** (Blainville) Blainville's Tantilla
Coluber planiceps Blainville, Nouv. Ann. Mus. Hist. Nat. Paris, Vol. 4, 1835, p. 294, pl. 27, figs. 3-3b.

Mr. Garni in his notes refers to a specimen, probably from San Antonio, in the St. Louis College Museum. Cope mentions one collected near San Antonio by a Mr. Kallteyer and the National Museum has one from San Antonio received from Messrs. H. H. and C. S. Brimley. This is the snake formerly known as *Tantilla nigriceps* Kennicott. I found no specimens in Mr. Marnock's Helotes collection.

73. **Micrurus fulvius** (Linne) Harlequin Snake: Coral Snake
Coluber fulvius Linne,Syst. Nat., Ed. 12, Vol. 1, 1766, p. 381.
Elaps fulvius Linne (Cope)

Marnock obtained many specimens of this beautiful serpent at Helotes. It has also been collected at San Antonio.

74. **Agkistrodon mokasen** Beauvois Copperhead: High-land Moccasin

Agkistrodon mokasen Beauvois, Trans. Am. Philos. Soc., Vol. 4, 1799, p. 370.

The copperhead, or "rattlesnake pilot" as it is sometimes called, is apparently not a common species in Bexar County. Cope says that it "is common from Dallas to San Antonio", but this is the only published reference I can find. A specimen from San Antonio is in the Scientific Society collection, Garni obtained one on the road from the city to St. Louis College and I captured one in a wild park along the San Antonio River. I found only one specimen in the Marnock collection.

75. **Agkistrodon piscivorus** (Lacepede) Cotton-mouth Stump-tail Moccasin

Crotalus piscivorus Lacepede, Hist. Nat. Serp., Vol. 2, 1789, p. 130.

The water moccasin has been collected near Helotes by Marnock. Reliable local observers tell me that it occurs in the San Antonio River and I have personally observed it on the Salado.

76. **Crotalus atrox** Baird and Girard. Texas Diamond Rattlesnake

Crotalus atrox Baird and Girard, Cat. N. Am. Rept., Pt. 1, 1853, p. 5.

The diamond rattlesnake is still common in some sections of the county.

77. **Kinosternon carinatum** (Gray) Keeled Musk Turtle

Aromochelys carinata Gray, Proc. Zool. Soc. Lond., 1855, p. 199.

Recorded from the Medina River by Yarrow. Garni collected a specimen in the San Antonio River.

78. **Kinosternon flavescens** (Agassiz) Yellow Mud Turtle

Platythyra flavescens Agissiz, Contr. Nat. Hist. U. S., Vol. 1, 1857, p. 430.

Louis Garni sent me two specimens. The following are his notes on this species: "Found occasionally in our natatorium. After heavy rains they are abundant in all depressions in woods and along roadsides where the water has collected. In some examples the back is overgrown with moss and in some specimens the carapace is higher than in others."

79. **Kinosternon odoratum** (Latreille) Musk Turtle: Stink Pot.

Testudo odorata Latreille Hist. Nat. Rept., Vol. 1, 1802, p. 122.

Specimens from Bexar County are in the United States National Museum collection. I personally collected a small specimen in the San Antonio River in July, 1913. This is the species recorded under the name of *tristycha* by recent authors.

80. **Kinosternon sonoriense** LeConte Henry's Mud Turtle

Kinosternum sonoriense LeConte, Proc. Acad. Nat. Sci. Phila., 1854, p. 184.

Louis Garni collected a specimen of this species in the San Antonio River. Cope reports it from Medina but not from Bexar County.

81. **Macrochelys temminckii** (Holbrook) Alligator Snapper

Chelonura temminckii Holbrook, N. Am. Herp., Ed. 1, 1840, Vol. 4, p. 29.

San Antonio River, Bexar County (Recorded by me in "Reptiles and Amphibians of Texas", Baylor Univ. Bull., 1915, p. 9). This great turtle is not uncommon in other sections of southwestern Texas.

82. **Chelydra serpentina** (Linne) Common Snapper: Snapping Turtle

Testudo serpentina Linne, Syst. Nat. Ed. 10, Vol. 1, 1758, p. 199.

Common in the rivers and streams throughout the county.

83. **Terrapene carolina triunguis** (Agassiz) Three-toed Box Tortoise

Cistudo triunguis Agassiz, Contr. Nat. Hist. U. S., Vol. 1, 1857, p. 445.

Recorded from San Antonio by Yarrow. I saw a living specimen in the possession of a curio dealer on Alamo plaza.

84. **Terrapene major** (Agassiz) Large Box Tortoise

Cistudo major Agassiz, Contr. Nat. Hist. U. S., Vol. 1, 1857, p. 445.

One specimen in the United States National Museum from San Antonio (Recorded by Yarrow).

85. **Terrapene ornata** (Agassiz) Painted Box Tortoise
Cistudo ornata Agassiz, Contr. Nat. Hist. U. S. Vol. 1, 1857, p. 445.

This box tortoise has been collected at San Antonio and Helotes.

86. **Pseudemys elegans** (Wied) Elegant Terrapin: Cooter
Emys elegans Wied, Reise Nord-Amer., Vol. 1, Pt. 4, 1838, p. 213.

This cooter is common in all the rivers and streams in Bexar County. Garni caught several in the St. Louis College natatorium.

87. **Pseudemys texana** Baur Texas Terrapin
Pseudemys texana Baur, Proc. Am. Philos. Soc., Vol. 31, July 1893, p. 223.

Baur's type of this species came from San Antonio. Marnock collected it in Helotes Creek.

88. **Gopherus berlandieri** (Agassiz) Texas Gopher
Xerobates berlandieri Agassiz, Contr. Nat. Hist. U. S., Vol. 1, 1857, p. 447.

The gopher tortoise occurs but must be rare. Mr. Marnock collected it near San Antonio but it seems to have been overlooked by the other collectors.

89. **Amyda emoryi** (Agassiz) Emory's Soft-shell Turtle
Aspidonectes emoryi Agassiz, Contr. Nat. Hist. U. S., Vol. 1, 1857, p. 407.

Common in the rivers and streams throughout the county.

ADDENDA

90. **Amphiardis inornatus** Garman Garman's Snake
Virginia inornatus Garman, Mem. Mus. Comp. Zool., Vol. 8, Pt. 3, 1883, p. 97.

In Copeia, No. 104, March 20, 1922, Dr. John Van Denburgh records a single example of this rare species from San Antonio. It was collected on May 6, 1911 by Chaplain Joseph C. Clemens, U. S. A., and is No. 30980 in the collection of the California Academy of Sciences at San Francisco. In addition to the four specimens of this snake mentioned by Dr. Van Denburgh (two from Dallas, Texas, one from Oklahoma, and one from San Antonio), I am informed by Thomas Barbour that there is a fifth example in the Museum of Comparative Zoology. This specimen was collected by Wamsley at Deming's Bridge, Matagorda County, Texas.

HYPOTHETICAL LIST

1. **Anolis carolinensis** Voight. Green Lizard: Chameleon Recorded from Gonzales County.

"Mr. Marnock informs me that it is abundant in the region south of San Antonio." (Cope, Bull. U. S. Nat. Mus., No. 17, 1880, p. 14). I found several specimens in the Marnock collection but they were in an unlabelled bottle.

2. **Cnemidophorus sexlineatus** (Linne) Six-lined Lizard

This species has been collected at New Braunfels and should occur in Bexar County.

3. **Plestiodon fasciatus** (Linne) Blue-tailed Skink: Red-head

This species occurs in Bee, Goliad, and other counties in the region southeast of Bexar County.

4. **Phrynosoma modestum** Girard Little Horned Lizard

The United States National Museum collection contains a single example labelled San Antonio, collected by Lieut. Churchill and Major Emory. It is quite likely, however, that this lizard was collected west of the Pecos River. See the note below, under head of *Crotalus confluentus.*

5. **Diadophis arnyi** Kennicott. Arny's Ring-necked Snake

Several specimens in an unlabelled jar in the Marnock collection. Bexar County is within the range of this species.

6. **Crotalus confluentus** Say. Plains Rattlesnake

"The specimen recorded by Cope from San Antonio, Texas, is entered in the Museum catalogue as collected 'between San Antonio and El Paso' " (Bailey, North American Fauna, No. 25, 1905, p. 50). The specimen referred to is in the United States National Museum and was collected by Col. J. D. Graham. It was probably collected west of the Pecos River. Many of the specimens collected by Emory, Graham and Churchill have very indefinite locality labels.

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